

Textbook Alignment to the Utah Core – Fifth Grade Science

*This alignment has been completed using an “Independent Alignment Vendor” from the USOE approved list
(www.schools.utah.gov/curr/imc/indvendor.html.) Yes _____ No _____*

Name of Company and Individual Conducting Alignment: _____

A “Credential Sheet” has been completed on the above company/evaluator and is (Please check one of the following):

☐ On record with the USOE.

☐ The “Credential Sheet” is attached to this alignment.

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Fifth Grade Science Core Curriculum

Title: _____ ISBN#: _____

Publisher: _____

Overall percentage of coverage in the *Student Edition (SE)* and *Teacher Edition (TE)* of the Utah State Core Curriculum: _____ %

Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: _____ %

STANDARD I: Students will understand that chemical and physical changes occur in matter.

Percentage of coverage in the *student and teacher edition* for Standard I: _____ %

Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I: _____ %

OBJECTIVES & INDICATORS

Coverage in *Student Edition (SE)* and *Teacher Edition (TE)* (pg #'s, etc.)

Coverage in *Ancillary Material* (titles, pg #'s, etc.)

Not covered in TE, SE or ancillaries ✓

Objective 1.1: Describe that matter is neither created nor destroyed even though it may undergo change.				
a.	Compare the total weight of an object to the weight of its individual parts after being disassembled.			
b.	Compare the weight of a specified quantity of matter before and after it undergoes melting or freezing.			
c.	Investigate the results of the combined weights of a liquid and a solid after the solid has been dissolved and then recovered from the liquid (e.g., salt dissolved in water then water evaporated).			
d.	Investigate chemical reactions in which the total weight of the materials before and after reaction is the same (e.g., cream and vinegar before and after mixing, borax and glue mixed to make a new substance).			
Objective 1.2: Evaluate evidence that indicates a physical change has occurred.				
a.	Identify observable evidence of a chemical reaction (e.g., color change, heat or light given off, heat absorbed, gas given off).			
b.	Explain why the measured weight of a remaining product is less than its reactants when a gas is produced.			
c.	Cite examples of chemical reactions in daily life.			
d.	Compare a physical change to a chemical change.			
e.	Hypothesize how changing one of the materials in a chemical reaction will change the results.			
STANDARD II: Students will understand that volcanoes, earthquakes, uplift, weathering, and erosion reshape Earth's surface.				
Percentage of coverage in the <i>student and teacher edition</i> for Standard II: _____ %		Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard II: _____ %		
OBJECTIVES & INDICATORS		Coverage in <i>Student Edition (SE)</i> and <i>Teacher Edition (TE)</i> (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 2.1: Describe how weathering and erosion change Earth's surface.				

a.	Identify the objects, processes, or forces that weather and erode Earth's surface (e.g., ice, plants, animals, abrasion, gravity, water, wind).			
b.	Describe how geological features (e.g., valleys, canyons, buttes, arches) are changed through erosion (e.g., waves, wind, glaciers, gravity, running water).			
c.	Explain the relationship between time and specific geological changes.			
Objective 2.2: Explain how volcanoes, earthquakes, and uplift affect Earth's surface.				
a.	Identify specific geological features created by volcanoes, earthquakes, and uplift.			
b.	Give examples of different landforms that are formed by volcanoes, earthquakes, and uplift (e.g., mountains, valleys, new lakes, canyons).			
c.	Describe how volcanoes, earthquakes, and uplift change landforms.			
d.	Cite examples of how technology is used to predict volcanoes and earthquakes.			
Objective 2.3: Relate the building up and breaking down of Earth's surface over time to the various physical land features.				
a.	Explain how layers of exposed rock, such as those observed in the Grand Canyon, are the result of natural processes acting over long periods of time.			
b.	Describe the role of deposition in the processes that change Earth's surface.			
c.	Use a time line to identify the sequence and time required for building and breaking down of geologic features on Earth.			
d.	Describe and justify how the surface of Earth would appear if there were no mountain uplift, weathering, or erosion.			
STANDARD III: Students will understand that magnetism can be observed when there is an interaction between the magnetic fields of magnets or between a magnet and materials made of iron.				

Percentage of coverage in the <i>student and teacher edition</i> for Standard III: _____ %		Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard III: _____ %		
OBJECTIVES & INDICATORS		Coverage in <i>Student Edition</i>(SE) and <i>Teacher Edition</i> (TE) (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 3.1: Investigate and compare the behavior of magnetism using magnets.				
a.	Compare various types of magnets (e.g., permanent, temporary, and natural magnets) and their abilities to push or pull iron objects they are not touching.			
b.	Investigate how magnets will both attract and repel other magnets.			
c.	Compare permanent magnets and electromagnets.			
d.	Research and report the use of magnets that is supported by sound scientific principles.			
Objective 3.2: Describe how the magnetic field of Earth and a magnet are similar.				
a.	Compare the magnetic fields of various types of magnets (e.g., bar magnet, disk magnet, horseshoe magnet).			
b.	Compare Earth's magnetic field to the magnetic field of a magnet.			
c.	Construct a compass and explain how it works.			
d.	Investigate the effects of magnets on the needle of a compass and relate this to the effects of Earth's magnetic field on the needle of a compass (e.g., magnets effect the needle only at close distances, Earth's magnetic field affects the needle at great distances, magnets close to a compass overrides the Earth's effect on the needle).			
STANDARD IV: Students will understand features of static and current electricity.				
Percentage of coverage in the <i>student and teacher edition</i> for Standard IV: _____ %		Percentage of coverage not in student or teacher edition, but covered in the <i>ancillary material</i> for Standard IV: _____ %		
		Coverage in <i>Student Edition</i>(SE) and <i>Teacher Edition</i> (TE) (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or</i>

OBJECTIVES & INDICATORS				<i>ancillaries</i> ✓
Objective 4.1: Describe the behavior of static electricity as observed in nature and everyday occurrences.				
a.	List several occurrences of static electricity that happen in everyday life.			
b.	Describe the relationship between static electricity and lightning.			
c.	Describe the behavior of objects charged with static electricity in attracting or repelling without touching.			
d.	Compare the amount of static charge produced by rubbing various materials together (e.g., rubbing fur on a glass rod produces a greater charge than rubbing the fur with a metal rod, the static charge produced when a balloon is rubbed on hair is greater than when a plastic bag is rubbed on hair).			
e.	Investigate how various materials react differently to statically charged objects.			
Objective 4.2: Analyze the behavior of current electricity.				
a.	Draw and label the components of a complete electrical circuit that includes switches and loads (e.g., light bulb, bell, speaker, motor).			
b.	Predict the effect of changing one or more of the components (e.g., battery, load, wires) in an electric circuit.			
c.	Generalize the properties of materials that carry the flow of electricity using data by testing different materials.			
d.	Investigate materials that prevent the flow of electricity.			
e.	Make a working model of a complete circuit using a power source, switch, bell or light, and a conductor for a pathway.			
STANDARD V: Students will understand that traits are passed from the parent organisms to their offspring, and that sometimes the offspring may				
Percentage of coverage in the <i>student and teacher edition</i> for		Percentage of coverage not in student or teacher edition, but covered in		

Standard V: _____ %		the ancillary material for Standard V: _____ %		
OBJECTIVES & INDICATORS		Coverage in <i>Student Edition</i>(SE) and <i>Teacher Edition</i> (TE) (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	<i>Not covered in TE, SE or ancillaries</i> ✓
Objective 5.1: Using supporting evidence, show that traits are transferred from a parent organism to its offspring.				
a.	Make a chart and collect data identifying various traits among a given population (e.g., the hand span of students in the classroom, the color and texture of different apples, the number of petals of a given flower).			
b.	Identify similar physical traits of a parent organism and its offspring (e.g., trees and saplings, leopards and cubs, chickens and chicks).			
c.	Compare various examples of offspring that do not initially resemble the parent organism but mature to become similar to the parent organism (e.g., mealworms and darkling beetles, tadpoles and frogs, seedlings and vegetables, caterpillars and butterflies).			
d.	Contrast inherited traits with traits and behaviors that are not inherited but may be learned or induced by environmental factors (e.g., cat purring to cat meowing to be let out of the house; the round shape of a willow is inherited, while leaning away from the prevailing wind is induced).			
e.	Investigate variations and similarities in plants grown from seeds of a parent plant (e.g., how seeds from the same plant species can produce different colored flowers or identical flowers).			
Objective 5.2: Describe how some characteristics could give a species a survival advantage in a particular environment.				
a.	Compare the traits of similar species for physical abilities, instinctual behaviors, and specialized body structures that increase the survival of one species in a specific environment over another species (e.g., difference between the feet of snowshoe hare and cottontail rabbit, differences in leaves of plants growing at different altitudes, differences between the feathers of an owl and a hummingbird, differences in parental behavior among various			

	fish).			
b.	Identify that some environments give one species a survival advantage over another (e.g., warm water favors fish such as carp, cold water favors fish such as trout, environments that burn regularly favor grasses, environments that do not often burn favor trees).			
c.	Describe how a particular physical attribute may provide an advantage for survival in one environment but not in another (e.g., heavy fur in arctic climates keep animals warm whereas in hot desert climates it would cause overheating; flippers on such animals as sea lions and seals provide excellent swimming structures in the water but become clumsy and awkward on land; cacti retain the right amount of water in arid regions but would develop root rot in a more temperate region; fish gills have the ability to absorb oxygen in water but not on land).			
d.	Research a specific plant or animal and report how specific physical attributes provide an advantage for survival in a specific environment.			